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U. S. Department of Agriculture
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THE AGRICULTURAL STUDENT



Christmas Number

December, 1911

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among Buttermakers, Cheesemakers and Dairymen is due to its power and safety as a dairy cleaner.

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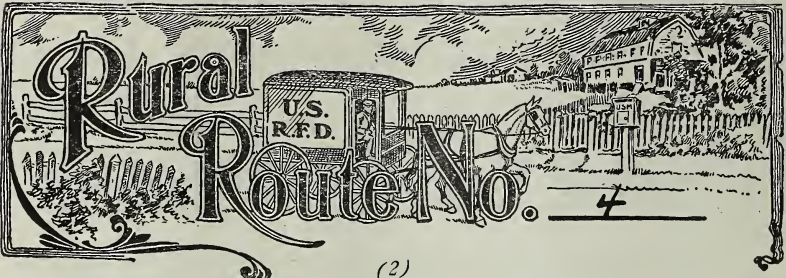
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Copy of a Page from Father's Letter



(2)

no rain in October and the wheat is small and does not look like it would stand the winter well.

We finished husking yesterday. From the acre where we tried your theory about bone-meal and clover making the Potash available, we harvested 50 bushels of rather chaffy corn, and from the rest of the field, where we used bone, clover and 50 lbs. Muriate of Potash per acre, we husked out 70 bushels per acre of tip-top corn that is nearly all fit to sell on the ear for seed corn.

I figure that a ton of Muriate of Potash on 40 acres of corn will pay for a year's post graduate study for you and leave you a little spare change to chip in for athletics.

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From Deadly Worms and Diseases

If you want healthy litters of pigs like these **you must** keep them free from worms. Even three weeks old pigs are often found loaded with these deadly pests. Their growth is stunted. They cannot put on money-making fat. They become easy victims of **hog cholera** and other destructive contagious diseases; not only that, but worms rob both old hogs and young pigs of their feed, sap their vitality, steal away your profits every hour they are allowed to infest your herd. Stop this costly loss with

TRADE MARK
SAL-VET
REG. U.S. PAT. OFF.

The Great Worm Destroyer and Conditioner

A medicated salt guaranteed to rid hogs, sheep, cattle and horses of all stomach and free intestinal worms. Not only that, but Sal-Vet aids digestion, puts an edge on the appetite; keeps your stock in tip-top condition. You do not have to "dose" with Sal-Vet. No drenching—no handling. Animals eat it naturally. They doctor themselves. Read what this wise farmer says:

"I have been a free user of 'Sal-Vet' ever since its introduction, and find that it is the most perfect worm exterminator on the market today. I feed 'Sal-Vet' as I would salt, and not as a feed, and it will positively do all that you claim for it."

E. C. STONE, Sec. Amer. Hamp. Swine Record Assn., Peoria, Ill.

Try it 60 Days Before You Pay I know that Sal-Vet will rid your hogs, sheep, horses and cattle of worms and indigestion and I want you to try it—at my expense if it fails. Just fill out the coupon telling me how many head of stock you are feeding and I'll send you at once enough Sal-Vet to feed them 60 days. If it doesn't do all I claim, then you needn't pay me one cent. Send now.

Send No Money—Just This Coupon

S. R. FEIL, Pres. S. R. Feil Co. Dept. Ag. S. Cleveland, O.

Prices: 40 lbs., \$2.25; 100 lbs., \$5.00; 200 lbs., \$9.00; 300 lbs., (47) \$13.00; 500 lbs., \$21.12. No order filled for less than 40 lbs.

Sidney R. Feil, Pres. The S. R. Feil Co., Cleveland, O.
Ship one each Sal-Vet to last my stock 60 days. I will repay the results in 60 days and will then pay for it. If it does what you claim. If it does not, you are to cancel the charge.
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Cattle _____ Sheep _____ Hogs _____
Horses _____ As S. _____
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"Since giving our hogs Sal-Vet all of them are well and doing finely. although the hog cholera is all around us."

ED. COLLINS, Delphos, Ohio.

The Ohio State University,
College of Agriculture.

"We have used 'Sal-Vet' with excellent satisfaction, and while we have not obtained information as to the absolute effect on our sheep, they consumed the preparation with results which appear to us to corroborate your statement, that it is desirable for discouraging the development

of worms, and keeping sheep in a good condition. "I believe that 'Sal-Vet' will repay the user in the results which come from its action in his flock."

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"A lot of hogs have died in this county from swine plague or cholera. Some of them were within three miles of me, but I have been feeding Sal-Vet, and have not lost a single hog. They are all doing well, eat all I give them and have good appetites for more."

D. A. ROSS, Kingman, Kans.,
Breeder of Pure Bred Poland Chinas.

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the most business. You will
find there is a reason for it."**

Experience and common-sense confirms his words.
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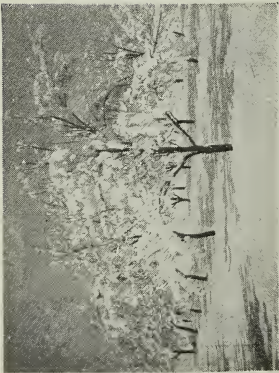
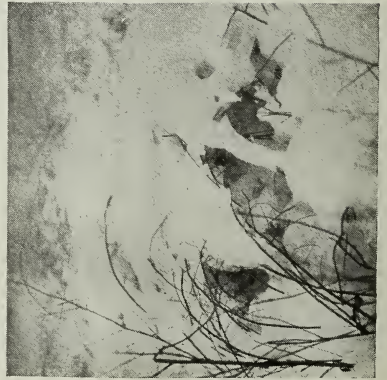
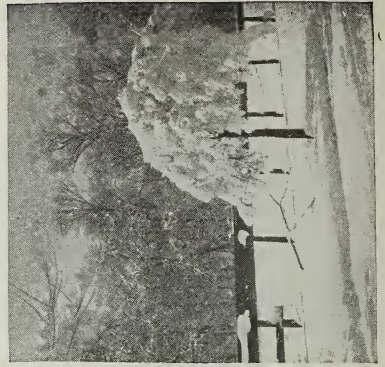
"O, DON'T YOU REMEMBER?"

| | |
|---|--|
| When, in the circling year, comes sport so rare? | It fills the cup of joy for am'rous swains |
| What with the sleigh can summertime compare? | And stirs the life blood through the health-filled veins. |

—C. Turner.

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THE AGRICULTURAL STUDENT

Vol. XVIII. OHIO STATE UNIVERSITY, COLUMBUS, DECEMBER, 1911 Number 4

Yuletide on the Farm

CININNATUS

“NOW comes the Christmas— of all our festal days the most blest and the most holy. 'Tis the anniversary of the advent of the Brotherhood of Man, my son, the sacred significance of which should sink deep into your heart, moulding from your youth a good man—a man with a loving heart, a glad-some spirit, a hand ever outstretched in the aid of his fellow.

“Would you behold the Yuletide season in her true glory, my son? Then come with me to the open country, to the land of farmsteads and forest and field, there will we find Christmas—as it was meant to be.

“We shall go to yonder hilltop, my son, and on the rural landscape gaze. Mayhap our gazing to pondering will lead, and pondering may a lesson give.

“Behold, all the expanse of Nature is clothed in a blanket of white, the broad vale below us, the encompassing hills. They lie serenely under the glistening carpet of snow, unsullied by the dirt or smoke of traffic. The crusted pines against the winter's sunset are the inspiration of poets. The goldenrod and teasel, with their burdens of snow, bending gracefully at the breath of Boreas; the fairy lacework of birches and beeches, forming billowy masses of white by the road side; the forest brooks, chained in glittering armor; the tell-tale tracks of “cottontail” in the snow; the brave chickadees, the fearless juncos, the modest quail, the foraging

crow; all these form wonders aplenty, and in them we delight.

“The musical jingling of many tiny bells meets the ear. Oh, around the turn of the road swings the sleigh, drawn by swift, sleek sorrels. 'Tis a party of rollicking, rural revelers, and the glad-some, gleeful shouts bubble forth from hearts pure and o'erflowing with joy and health and living.

“See, they draw in at yonder farmhouse with the white smoke of a wood fire rising heavenward from its huge chimney.

“What a scene of peace and prosperity, content and happiness, the mere-
stead presents. The broad, level fields, the woodlot, the orchard, the barns and the cribs filled to bursting, the comfortable quarters for the beasts, the rambling, well-kept farmhouse, the—. What, time to light the lamps? Yes, already the sun has dropped out of sight behind the hill. Evening shadows lengthen.

“There is a light in every farmhouse now. And soon, the bounteous supper finished, the sleighloads of country folk will gather at the church in yonder little village, and on leaving take away, each the heart full of cheer, and gladness, and praise, each ‘his measure as he meted.’

“In search of a scene of happiness, are you? Then go where Nature and natural conditions are chiefest in the minds of men. 'Twill delight you when you observe this ‘Yuletide on the Farm.’ ”

Finance and the Farmers

MYRON T. HERRICK
Ex-Governor, the State of Ohio

THE absence of scientific farming in this country is rapidly becoming a serious problem. The great amount of unused land in Ohio and other states and the waste evident in the cultivation of that which is being worked are sufficient evidence that a determined effort is needed to improve conditions. My observations in France and Germany have convinced me that, hand in hand with the effort to teach and establish scientific methods in farming, must go facilities by which the small landowner can obtain funds on a favorable basis. In France and Germany those organizations that have for their purpose the supplying of funds to farmers have been so successful that their bonds sell on almost as advantageous a basis as do municipal bonds. The result is that the farmer who needs funds for the improvement of his land or for the purchase of additional stock or new implements can secure them on terms that are not likely to embarrass him. I am con-

vinced that similar organizations would be successful in this country, and that by reason of the assistance that they could give to the farmers, they would be the means of materially increasing the productivity of the soil. Of course, the prime motive of such organizations must not be to make money for promoters or stockholders, but to loan money to land-owners—particularly to those owning and cultivating small farms, on easy terms and at low rates; and the organizations must be under very strict state or national supervision.

At the recent convention of the American Bankers' Association a committee was appointed to consider the subjects of farm improvement and farm financing in relation to conditions in this country, and to make a report at the next convention.

It is to be sincerely hoped that out of such action will come permanent and lasting benefits to the American landholder in a financial way.

The frozen river circling far around,
And there beyond the glossy overflows
Are dotted here and there with gliding
forms,
Steel-shod, swift-footed, and with
sparkling eyes
That tell of health that air and motion
give.

Who now will wish away December
storms?
Then hail to the frost! and the North-
ern King!
And hail to their reign benign!
May the snow shoe's swing and the
keen skate's ring
Be heard till the end of time.

A Motor Plow Test in Germany

DEAN H. C. PRICE

(Written at Halle a Salle, Germany)

THE farm of Rabbthge and Giesecke at Klein Wanzleleben, Germany, has an international reputation for the production of sugar beet seed. It is situated in North Central Germany, a short distance from Magdeburg, and consists of 12,000 acres, and is in the heart of the sugar beet district of Germany. Here has the breeding of sugar beets been carried on to an extent not equaled any place else in the country. The

its own railroad and the buildings clustered together, give the impression of a large public institution.

But I did not start out to describe the farm, but rather a motor plow demonstration that was held at the farm. It was a bright, crisp October morning, and a special train took the visitors out from Magdeburg. At the station we were met by the farm teams, fine Belgian draft horses, hitched to the beet



OXEN PLOWING AT KLEIN-WANZLEBEN.

Notice the Size of the Field.

Klein Wanzlelebener beet (the leading variety of sugar beets) was originated and has been developed on this farm. The estate has its own sugar factory, chemical laboratories and immense warehouses for cleaning and storing sugar beet seed. Another important feature of the buildings is the barracks for housing the Polish women. They are brought in every spring and sent back every fall and do the principal part of the work of cultivating and harvesting the beet crop. The farm, with

wagons, and taken to the field where the demonstration was held. German agriculture is one of extremes; in one field you will see farm work being done by the most primitive methods, in the adjoining fields, perhaps, by the most modern labor-saving machinery. So in this plowing demonstration. On one side of the field 18 yoke of oxen were plowing, two yoke hitched to each plow, and pulling by bands across their foreheads. On the other side of the field were three forms of the most recent de-

velopment in motor plows. (1) The steam plow, which is a fine gang plow that is pulled back and forth across the field by a cable attached to traction engines at opposite ends of the field. (2) The Koszeg implement, which is a combination plow and pulverizer, drawn by a gasoline motor, and leaves the ground ready for seeding. (3) The Stock motor plow, which is a fine gang plow drawn by a forty horse-power gasoline motor, with high wheels, and

to \$6,000), makes their use prohibitive except on the large estates.

After spending a couple of hours in the field watching the plows work, the party was taken back to inspect the buildings and laboratories of the farm, and then all gathered in one of the buildings and representatives of the different plows were given an opportunity to tell the merits of their respective plows. Although my inability to understand the language perfectly pre-



THE KOSZEG IMPLEMENT.
Combination Plow and Cultivator.

having blades on the wheels to keep them from slipping.

About two hundred men were there to see the plows work and they represented the aristocracy of the sugar beet growers of Germany. Men of title, men of rank, men of property, they came in automobiles, in carriages and by train. Many of them control farms almost as large as the one on which the demonstration was held. Interest centered chiefly in the Stock plow, which the Germans seem to think is the coming motor plow. However, the price at which the motor plows sell here (\$5,000

vented my grasping all of their arguments, it was evident from the length and intensity of their speeches that arguments were not wanting.

At two o'clock the whole party, as guests of the farm, was taken to the club house, which the farm maintains, and served to an elaborate dinner. This was a typical German "spread" and "Hochs" to the hosts were frequent and loud. It was four o'clock when the dinner was ended, and with good cheer and good fellowship we all departed, having spent a profitable and pleasant day on one of the finest farms in Germany.



THE STOCK MOTOR PLOW.
The Most Popular With the Germans.



"TO GRANDFATHER'S HOUSE WE GO."

What Do Farmers Read?

T. L. WHEELER, Extension Editor

THE claim has been made that farmers, as a class, do little reading, and that there is more or less illiteracy among people living in the strictly rural communities. How true this may have been in the past, we are not here to say, but we do know that it is not true with respect to the present day farmer. He reads, studies, writes, and there is just as much refinement and culture found in many country districts as one can hope to find among city residents.

Good books and magazines are found in nearly every farm house in Ohio, in fact, such a home without its supply of good literature is rather an exception. After visiting a large number of farm houses in the state, an agricultural instructor informs the writer that at nearly every place he found one or more good farm journals and woman's magazines on the center table, besides a daily or weekly newspaper, books, bulletins, etc.

The marvelous growth of the agricultural publications is a good indication that farmers read, for there must be a demand to create a large supply. Up to 1840 the agricultural literature, strictly American, was scarce, and that published abroad was largely of a descriptive nature. Only twelve agricultural books had been published prior to the establishment of the land grant colleges. The first farm papers were started about 75 years ago. The newspaper directory of 1910 gives the number of agricultural papers in the United States as 262. Of this number 112 are published monthly, 34 semi-monthly, 103 weekly, 10 daily, 1 semi-weekly, 1 bi-monthly and 1 quarterly. Their combined circulation totalled over 11,000,-

000. These journals are mostly read by people living in the country.

"Of making many books there is no end" was not written about agricultural books particularly, but the application is an apt one. Complete statistics are not at hand as to the number of such books in print, but the catalogue of one large publishing firm advertises 512 rural books. The library of the Department of Agriculture, Washington, D. C., contains over 100,000 volumes devoted to agriculture and kindred subjects.

The free rural mail delivery has made possible a wider distribution of agricultural literature and has brought the farmer in close touch with all the best reading matter. This reading and study has had a tendency to elevate the literary tone of rural communities and make farmers better satisfied with their profession. Also, it has attracted the attention of people in cities and towns to the advantages of country life. Undoubtedly, the widespread distribution of this class of literature is responsible for the "back to the farm" movement.

It is easy for farmers to get plenty of good reading matter. Books, papers, magazines, etc., were never so cheap as now. Besides the farm journals and books, each of the state experiment stations issue bulletins that are sent free to the residents of their respective states, and the United States Department of Agriculture issues annually, over 1200 publications. Nearly 400 of these are farmers' bulletins for general distribution. These, together with the free traveling libraries and agricultural college publications, furnish a plentiful supply of good literature for the farmer and his family, at a very

moderate cost. An instructor, at the College of Agriculture, has been wont to tell his farmer audience that they can build up a good library for 3 cents, and this is the way they can do it. Send a postal card to the United States Department of Agriculture, Washington, D. C.; one to the Experiment Station, Wooster, O., and one to the College of Agriculture, Columbus, O., asking for all free bulletins. These bulletins contain a vast amount of valuable infor-

government bulletins are sent free often gives farmers the impression that these publications are of little consequence and they are laid aside with only a very superficial examination when they might be found very helpful. As an illustration: A farmer in Allen county had a fine flock of sheep and many were dying from some disease. He was much troubled, not knowing what to do. The country minister called on him one day, while he was



"AS THE TWIG IS BENT."

mation and, if carefully indexed and filed away, will make a library any man might be proud of. Secretary Wilson says: "I believe it may be safely asserted that practical agriculture in the United States has received more actual benefit through the issue and wide distribution of farmers' bulletins than from any single source."

A bulletin or paper is of little value unless it is studied and carefully filed away for future reference. The fact that the experiment station, college and

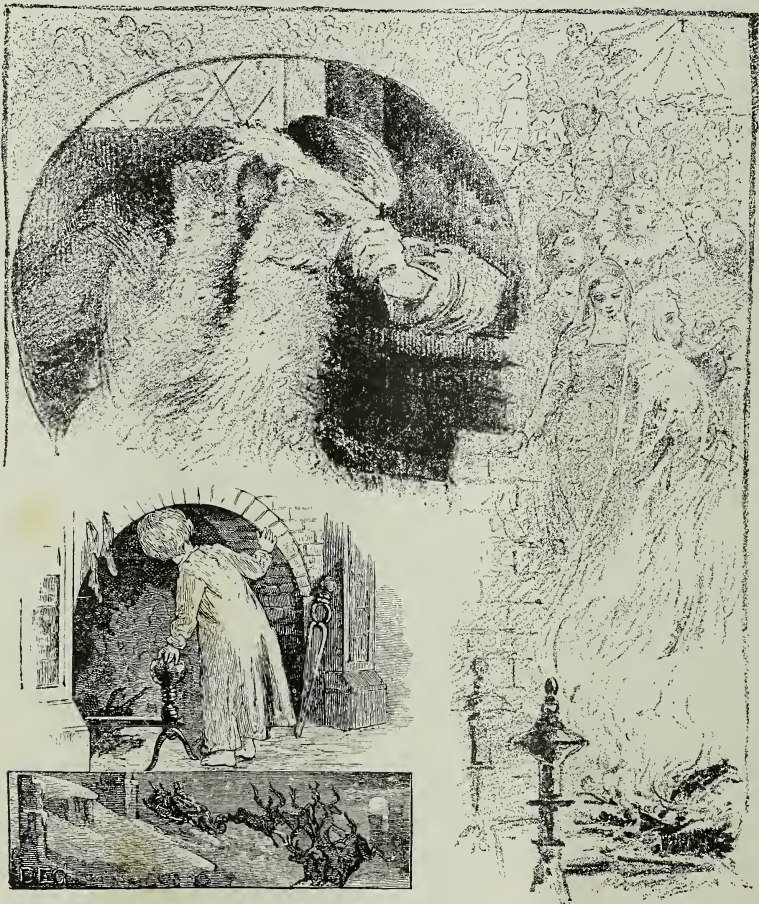
out with the sheep, and heard all about the trouble. The minister went to the house to wait for the farmer and, while sitting by the center table turning over the books and papers, he noticed a bulletin on sheep. Still thinking of his friend's trouble he opened it and found, to his surprise, that it treated of the very disease in question. When the farmer came to the house, the minister asked, "John, what are these bulletins on your reading table?" "Oh, they are sent here from the government

and don't amount to much, I guess," John answered. "Well, here is one that tells what is the matter with your sheep," said the minister, and then the farmer was interested. He began to study the bulletin, that had been thrown aside, and saved the rest of his flock.

Some system of filing and indexing should be used with all bulletins and papers received. It need not be elaborate as long as it will answer the purpose. Most of the better farm papers print an index at the end of each year, giving titles of articles and the numbers of the pages on which they appeared. If each week's copy is filed

away, a year's issue will make a very valuable volume.

There is plenty of good reading matter for the farmer and his family and we believe they are making good use of it. There are few Ohio farmers who are not well informed on the topics of the day, and all are becoming better informed on the fundamental principles underlying their profession. Undoubtedly, there is room for much advancement and improvement along this line, as is the case among all classes, but the fact that farmers are willing and eager to read and study augurs well for the future of agriculture.



Impressions of Washington

THE WANDERING ALUMNUS

WHILE enjoying a ten-day stop-over in the Capitol of this great nation, the writer had the privilege of seeing a large number of sights extremely interesting. While pondering over these a sudden notion came to him that some of these things might interest his friends back in Ohio, friends who are still striving for the coveted degree and who will have to wait some little time before visiting the East, to see these places at first hand and so get the better impression.

As one arrives in Washington, the new Union Depot gives him a most favorable first impression. As we leave this and get our first glimpse of the Capitol in the distance we at once decide to visit it at our first opportunity. The opportunity of seeing our national law-making body discuss various phases of reciprocity, with Vice-President "Sunny Jim" in the one chair and Champ Clark in the other was one of the many enjoyable features of the visit.

More adequate descriptions of this wonderful building, the corner-stone of which was laid by President Washington in 1793, and the completion of which did not take place until the early fifties, will be found in many other places, and will therefore not be attempted here, further than to state that it occupies three and one-half acres of space, surrounded by beautiful plantings. From the front entrance we may look away to the east upon the building which contains the largest number of American books in the world.

Entering this great Library of Congress, we find much beyond our expectations. "Wonderful! Wonderful!"

was all we could utter. To the right and left of this structure we find the magnificent office buildings for the Senators and Representatives.

Taking the Pennsylvania Ave. car, we will next wend our way to the business section and we must stop at Eleventh street and take a look at the post-office. We call at the general delivery window, which never closes, for our mail, and then proceed to the Dead Letter Museum on the third floor. It is here that a vast variety of things find their last and final resting place, should they not be properly sent thru the mail or not contain sufficient or proper addresses.

We next go up the avenue to the other Government Buildings, first to the Treasury to get a glimpse through the bars at the great stacks of money, all new and crisp and in every way inviting. But the man behind the bars tells us it is the wrong day for distribution. The one Socialist in Congress has not yet attacked this problem.

The White House is the next building we inspect and thence we go to the mammoth building housing the State, War, and Navy Departments.

We must not fail to mention the beautiful parks to the front and rear of the White House, with fountains and statues, and the beautiful trees which are found almost everywhere in Washington.

Going south we arrive at the magnificent Washington monument, which may be seen from far and near all over the District of Columbia. If we take the elevator to ascend to the top—a distance of five hundred feet, it will take us five minutes. We get a grand bird's eye view of the historic Potomac

and the region round about. This brings us to the chief interest of most of "The Student" readers, namely, the great National Department of Agriculture, for it is from here that we can see nearly all the buildings and besides get a slight glimpse of Arlington Farm.

Before visiting the Department we must take a look around the Smithsonian and the Old and New National Museums. In the former we see some of the skins collected by Col. Roosevelt, among the vast collections there. In the latter may be seen the first auto constructed in this country as well as hundreds of things of similar and diverse nature.

The other places of general interest in the capital city must now be left for our next visit and we will go to the most interesting of all, the Department of Agriculture.

We approach this by means of the avenue of Gingko or Maiden Hair trees. This leads us to the unimposing, red brick building with its rather conspicuous sign marked "Agriculture." Beautiful landscape decorations are in the foreground. We can hardly realize the good things in store for us, and indeed it is here that the writer feels his shortcoming to express his impressions in full.

This building is the chief center of activities, containing the Secretary's office and the various other executive offices. The little village of Bureaus surrounding this are of more interest, for it is here we find many old friends. One's estimation of Ohio State is indeed not lowered when he finds the goodly number of Alumni who are making good here.

In visiting the marble building nearby we find an '08 graduate working under an older alumnus. Their particu-

lar problem is with corn. It seems that corn which has been loaded here in perfectly good condition for exportation, has been found to deteriorate by the time it reaches the other side of the ocean. During the past year our friend, Mr. C——, has had a trip to Europe in the interests of his corn problem. At some future time we shall see listed a bulletin telling about this and relating the solution of the problem. Another alumnus is found in this building, whose partial duty it is to search the literature treating on various subjects of agricultural moment.

The Bureau of Entomology has three workers who were trained at Ohio State.

Then, if we climb some stairs in the building housing the Bureau of Chemistry, we find an old friend to most of us, making nitrogen determinations. Listen and I will tell you a secret which must, however, be related no further. Some of his pals have taken to calling him "Kjheldahl."

An alumnus of the College of Arts is also found in this building.

Farther east we come to another office building where an '08 grad has his headquarters when he is not traveling in the Southern States in the interests of Horticulture. His studies at present are with the peanut, but incidentally he is working with some other crops.

Another alumnus is working with new plant introductions, particularly with the starch tubers which are to substitute the potato in southern regions.

Lack of time prevents calling on other Ohio State people, although there are others here, some in the Bureau of Soils, some in the Bureau of Animal Industry.

These few facts ought to be enough

to convince one that Ohio State is training men to fill the best positions in all this land.

To Arlington Farm, across the Potomac, from the Department offices, we now betake us. This farm occupies a part of the old Lee estate, which was confiscated at the time of the Civil War, but later paid for. Across from the entrance to the farm is the entrance to the Arlington Cemetery, with its most interesting and fascinating landscape plantings.

Happening to meet on the car an eminent Doctor of Science who has charge of the vegetable work, we will listen to his story. It was interesting to note how calculations are simplified in the tests by having the rows of vegetables one-fifth rod apart and eight rods long, thus occupying exactly one one-hundredth of an acre. For the variety tests one-half to one rod is considered of sufficient length.

Owing to dry weather, which factor will be eliminated by irrigation in the future, and to a hail storm in the previous month, the scene was not of the best. However, it was a most profitable hour withal.

The Doctor in charge of the drug investigations next gives us an insight into his interesting work. Here we see many late introductions which are be-

ing tried out and, in cases where they are found profitable, they are sent out to the growers, and it is thus that new drug crops are brought within culture in this country.

The plots of grain are being threshed near the barn and, by blowing the straw into a strawpress, it is quickly and conveniently handled.

A variety test of peaches is being carried on and as the earliest varieties were just coming into bearing we enjoyed this feature very much. The apple orchard, thirty acres in extent, has only recently been planted to two or three of all the leading varieties.

To enter into details concerning the meteorological, entomological, pathological, and other logical investigations which are being carried on here is out of the question. Suffice it to say it was an extremely interesting visit, being much more profitable and enjoyable than the writer can possibly express.

We must now leave Washington with many interesting places yet to be seen, hoping that we may have conveyed to worthy readers of our beloved "Agricultural Student" a little inspiration of the great capital city of the world's greatest nation.

"On to India!" is our slogan now.



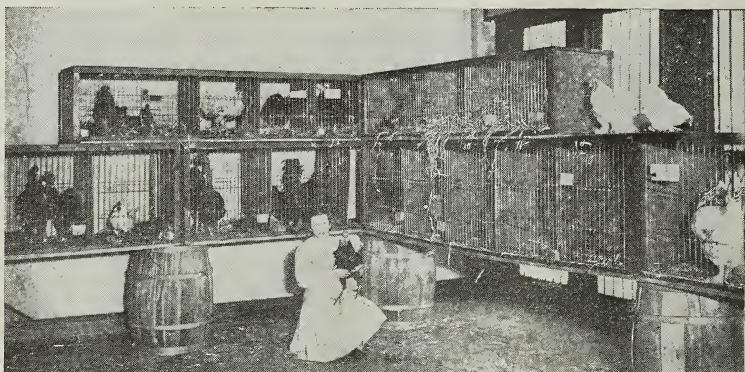
Fitting Birds for the Show

WILLIAM FRESHLEY, Willoughby, Ohio

IF the birds are of proper breeding and quality, conditioning is the next important feature for prize-winning. By conditioning is meant the development of the external appearance of the bird and training him to exhibit his excellence to the greatest advantage.

As the birds approach maturity, the sexes must be separated and the individuals placed in coops about three feet square. Frequently, the males are wild, and if taken directly from the yards

be borne by the hand. Shave into it a cake of white, pure soap, then put in the bird and work the lather well into his plumage with the hand. Work with the feathers, not against them, as they are easily broken and a broken main wing or tail feather may mean the loss of a prize. In the second tub the soap is washed out of the plumage with lukewarm water. Tub No. 3 should contain cool water with about as much blueing as would be used for clothes. Any soap which may remain is washed out



A CORNER IN POULTRY.

to the show room, will stand small chance of winning, no matter what their color and plumage may be.

One of the best ways to get a male to exhibit all his good qualities is to carry a female bird with you each time you approach his coop. If this is done for three or four days the male will meet you at his door in such model form and boldness as can be taught him in no other way.

If the birds are white or their plumage is soiled, they must be washed a few days before the time for shipment. Have ready three tubs of water. Tub No. 1 should have water as warm as can

in this tub. The bird is now ready to dry. A room warmed to at least 85 degrees is necessary. Place the bird in a coop near the fire, but not close enough to curl the feathers, as this would spoil the bird for exhibition. Loosen the feathers frequently while drying, so that they are given a nice fluffy appearance. When he is thoroughly dry, place the bird in a well bedded coop, where he will be kept clean.

It is not necessary to wash black or parti-colored birds. They may be sponged with warm water and rubbed with a dry cloth on which has been

(Concluded on page 220)

The Apple Show

R. W. JORDAN, '14

THE first annual apple show of Ohio State University Horticultural Society was held in Townshend Hall, December 7 and 8. Over nine-tenths of the fruit exhibited was Ohio grown and most of the exhibits were made by Horticultural students. This does not necessarily mean that they raised the fruit, just so it was Ohio grown. The ultimate purpose of the show was to test

tion: W. W. Farnsworth, of Waterville; R. C. Van Rensseler, of Port Clinton, and Dr. W. O. Thompson, the President of Ohio State University, who had some of his home-grown products on exhibit.

Among other things displayed that are worthy of mention were: A collection of one hundred specimens of plant diseases and economic insects in glass



OHIO STATE'S FIRST APPLE SHOW.

the students' ability in the selection of fruit for exhibition purposes. It takes five apples to make a plate and each plate is an entry. Colorado, Idaho, Michigan and Maine were represented. However, the prize-winning fruit came from Ohio. The exhibits from other states did not come up to the Ohio grown fruit in quality, even the Ohio color was better in many instances.

Of those who exhibited fruit, not connected with the Agricultural College, the following deserve honorable men-

mounts, by L. E. Melchers; a vegetable exhibit and a preserved fruit exhibit for educational purposes; a number of diseased apples; a fine weed collection exhibited by Mrs. Mark Simonton and presented to the College and also oil heaters, spray pumps, picking baskets and apple baskets.

There were over 300 plates and 20 trays of Ohio fruit, 50 plates of western fruit, and a number of baskets, boxes and barrels of fruit. There were in all 75 varieties, for which there were

awarded cash prizes and subscriptions to "Better Fruit" and "The Ohio Farmer."

The prizes were awarded by Prof. Wendell Paddock, head of the Horticultural Department. Prof. Paddock has recently been in both Massachusetts and Colorado to judge fruit at apple shows and is considered one of the leading apple experts in the United States.

The following were awarded prizes: S. J. Sutton, Mrs. Mark Simonton, C. L. Burkholder, Earl Jones, C. M. Fritz, R. R. Rankin, J. O. Erwin, G. C. Wolf, G. B. Crane, R. P. Dyer, C. B. Kirgan, E. E. Belknap, R. O. Brigham, R. W. Kelley, C. R. Hurst, Geo. V. Titus, L. W. Boving, V. C. Cooper and R. C. Milburn.

Dr. W. O. Thompson received first prize for the best exhibit of farmer's grown fruit. This was the most honored exhibit of fruit at the show, and "Prexie" received a subscription to the magazine, "Better Fruit."

Clayton S. Long, a junior in the Horticultural College, scored highest in the judging contest. He made ninety-eight per cent of the total number of points, which was a showing of remarkable ability in judging fruit.

The following points were counted in judging the apples: Form, 15 points; size, 20 points; color, 25 points; quality, 15 points, and freedom from blemishing, 25 points; making a total of 100 points for perfection.

Mr. Long will have his name engraved on the silver cup, which is to remain the property of the Horticultural Society, and successful contestants at future apple shows will have the same honor bestowed upon them.

The show was educational to the students and the public. The former took great pride and interests in the exhibits. It truly demonstrated the booster spirit

in the Agricultural College. Some came from far corners of the state to see the show; of these many were particularly interested in the expert apple packing demonstration. Some came for this feature alone. Mr. Edward Rowan, an expert at apple packing, conducted this demonstration. Mr. Rowan, formerly from Colorado, is now a fruit grower of Southern Ohio.

The show was remarkably large for the first one. It was distinctive in the fact that it was conducted entirely by students. Moreover, it was larger than the state show held in Townshend Hall three years ago. A large part of the credit for the successful management of the show must be given to Leo. E. Melchers, Claude Durham and Andrew Burns.

The great success of the first show points to a still larger and more successful exhibition next year.



Ohio at the International

B. A. WILLIAMS, '13

MORE than half a hundred Animal Husbandry students represented Ohio State at the Twelfth International at Chicago, this year of 1911. 'Twas the largest delegation that ever went from the University to witness that climax of Stock Yards events. To those favored ones who were able to attend, the rehearsal of a few of the interesting points will seem scarcely a miniature of one's real impression of the exhibition.

The mammoth amphitheatre was crowded with rings of stock all through the day for a full week, and on several evenings light horses were shown in connection with other entertainments of highly interesting nature.

Judging from the incessant cheering, it was a toss-up between the Push Ball Contest and Sheep Driving Exhibition for favor with the spectators. Both were forms of exhibitions of rare animal skill on the one hand and patient training by their masters on the other. But the six-horse teams four of them, still maintain their enviable popularity, their every movement and maneuver giving a thrilling sense of power and admiration.

Out in the yards the carload lots competed for premier place on thickest flesh. What a valuable object lesson was found in a comparison of those deep, thick Grand Champion Angus steers with the average run as we found it in the Stock Yards! Truly there is need for such a demonstration of the possibilities of the feeders' art, and Messrs. Escher & Ryan, of Iowa, deserve much praise for dragging down the royal purple.

Ohio was as conspicuous as ever in the winning of premiums. She is ever in the van guard.

Especially was this true in the Short-horn Cattle classes. The wonderful cow, Princess Marshall, owned by Rosenberger & Edwards, of Tiffin, O., was for the second time proclaimed Grand Champion female of the breed. Carpenter & Ross, of Mansfield, had the first prize Shorthorn herd, while Thos. Johnson & Sons scored their usual lion's share of awards, among them Reserve Grand Champion female, on Fair Start 2nd. They also carried away Championship on a Duroc fat barrow. M. L. McCoy & Son, of Washington C. H., annexed one of the very highest honors by the winning of the Grand Champion carcass in the slaughter contest. 'Twas one of their Angus steers which brought the ribbons to the McCoy chest and joy to "State" boys' hearts.

That the Aberdeen-Angus breed is still producing the topnotchers needs scarcely further verification than the fact that the Grand Champion steer was an Angus from Iowa College. He sold for 90 cents per pound and weighed 1690.

That college work in Animal Husbandry is practical is likewise exemplified by Nebraska Agricultural College, when she scored reserve to the Grand Champion steer.

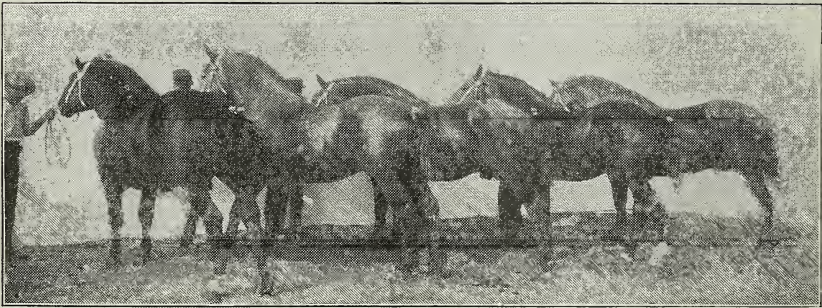
It was the greatest draft horse show the sun ever shone on. The Percherons had the greatest number, with Clydesdales, Belgians, and Shires close seconds. Among the Clydesdales the prize-winners of the three-year-old mare class were agreed to have been the best five Clyde mares ever brought together at any time in the world's history. Ohio's horse exhibitors shone most among Percherons and Belgians. McLaughlin Bros., Bell Bros. and G. W.

Crawford were contending in the front ranks. McLaughlin's wonderful Houtbois carried off the reserve Championship among the Percherons. The Belgian show was stronger than ever—a revelation. Shires were there, claiming their customary share of attention. A very creditable display of Suffolks was also on hand.

Sheep—not of the common kind, white faces, black and brown there were, gathered in splendid profusion, a sea of woolly beauties. Here Ohio State came in for high and mighty honors. On Southdowns, she captured second and third in open wether classes.

with fourteen lively youngsters, all of which hailed from Ohio, attracted much attention, especially from Chicago visitors.

Last, but not least, comes the Chester White claiming recognition with the Grand Champion barrow of the show and later the Champion of the slaughter contest, signal affirmation of the judges' discretion. Ohio State University was given Reserve Grand Champion barrow on our Berkshire barrow, Ohio's Baron. The same animal was first in its class and Champion of the breed, which added another silver cup to Ohio State's growing collection of trophies.



AN EQUINE DISPLAY.

Courtesy McLaughlin Bros.

In the Clay, Robinson & Co. specials we had first prize pen and champion wether. Rah! Rah! Purchases of ovine species were made. A pen each of Cheviot lambs, Dorset lambs and Southdown lambs, as well as two cross-bred lambs, will add materially to the regular University flock of breed specimens.

The swine department was by no means neglected, nor were there any well established breeds unrepresented, from the peculiar mule foot to the belted Hampshire, from the growthy Duroc to smooth Berkshire, from thick set Poland China to the mammoth snouted Tamworths and the prolific Yorkshires. A maternal specimen of the latter breed

In the judging contest Ohio did not take a foremost rank, but won the Armour scholarship on sheep judging. A detailed study of the results reflects much greater credit on the team than does the total score. The Ohio State team was called to the arena at the last minute, and without special training, gave very good account of itself. With a team of like personnel and larger training, the next year will see Ohio to the forefront. Untoward circumstances fully indicate what may seem but a fair standing. The coach and the team are to be congratulated on upholding Ohio State's banner unsullied and above reproach.

The annual banquet of the students of the Agricultural Colleges, which according to custom is held during the International, was in charge of the Ohio State students this year. The famous Saddle and Sirloin Club was the setting. Suffice it to say, that it was a most successful affair, there being an increase of fifty per cent. in attendance over previous years. Nine colleges were represented, with as many responses on the program.

Pres. H. J. Waters of Kansas Agricultural College, Dr. C. W. Gay of University of Pennsylvania, and Prof. Hill of Chicago University, were the principal speakers of the evening. Mr. Gilbert Gusler presided to a queen's taste as toastmaster, and directed still greater

credit and enthusiasm "Ohio Stateward."

Ohio is one of the important units in the making of the great International—important in matters of exhibitors, of example, of guidance, of taking part. The Buckeye's heart wells to bursting as he proudly views the part played by Ohio in the greatest live stock exhibition which the world has ever known. When the International history is written "Ohio" will appear on the contents page. To every student interested, to see the show is worth the price many times over. So next year, the chapter, Ohio at the International—is to be a still grander one, and more brilliantly illuminated with representations from Ohio's greatest University.



With a tingle and a tangle,
All the sounds a-seeming jangle,
And a-swing backward, forward, to and fro;
On the frosty morning breaking,
Clear their silvery notes outshaking,
The sleighbells are ringing o'er the snow.

How they set the nerves a-thrilling,
Through the heart a joy distilling,
Mingling music with the beauty of the day;
As with slipping and with sliding,
Swiftly, softly, smoothly gliding,
With a song o'er the snow we drift away.
—Lisa A. Fletcher.



OF

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COLUMBUS, OHIO, DECEMBER, 1911.

Editorial

Drag in the Yule log. Hang up the festoons of mistletoe and holly. Let peace and happiness reign supreme. Christmas, that greatest of festal days, again occupies the chief center of interest for the entire Christian universe. It matters little how many times St. Nicholas has passed your way, Xmas never fails to call forth a thrill of anticipation and a joy of realization unattained on ordinary occasions.

Christmas, in spite of the present day attempts at commercialization, still remains a day "when joy and mirth are unrestrained and gladness fills the air," a day of thanksgiving and prayer, a day of generosity and well-wishing.

"The Student" wishes you a tranquil mind, faithful friends, and material

comforts. With these it is superfluous for us to wish you a "Merry Christmas."

× × ×

Stock show—Apple show—Corn show—one continuous succession. Verily,

THE SPIRIT OF EXPOSITION.

the "Spirit of Exposition" pervades the atmosphere.

And we say, let it be so. Since education by visual demonstration has come to play such an important part in exposition, the time and energy expended in arranging displays is fully justified.

If the products of my neighbor's field or orchard are superior to my own, surely I may profit by observing both his products and his methods of production. Nothing exerts a greater influence toward the attainment of ultimate per-

fection in a breed or variety, than does the spirit of rivalry developed by public competition.

As long as expositions of the kind mentioned remain open, sincere and unsullied by mercenary motive, they must be rightfully reckoned among the most potent factors in agricultural development.

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The apple show proved to be an unqualified success from every viewpoint—exhibition, good

THE cheer, the boosting
APPLE SHOW. spirit, the enlargement of horticultural facilities at the University—all were exemplified in a material way. Next year's show is destined to be even larger and better, for that the horticultural spirit in the State of Ohio, and in her University, is just beginning to manifest its real significance and might, can not be denied. Incidentally, adequate equipment and housing for a department which is doing such a good work under such a handicap, becomes more and more imperative. We can do much by word and deed to promote the coming of a fine new horticultural building. Let's at it then!

× × ×

A. D. 1912! How does that sound? Well, it all depends upon who is answering the question.

THE The advent of the new
NEW YEAR. year, marks off for a few, we must remember, simply one step nearer the end. For the majority, however, New Year's days represent merely the starting post for another leisurely trot around the twelve month's course, enjoying the comforts of life as they go.

But for those of us who are young and active and vibrant with life, the

coming of the new year causes the realization, with a thrill of delight, that we are one step nearer the attainment of our ambitions and the fulfillments of our ideals.

A moment's reflection, however, recalls the rapidity with which these anniversaries have recurred, and immediately we are flooded with a feeling of poignant compunction at the memory of the hours, and days, and years we have foolishly wasted. And—Therefore, we do hereby highly resolve, etc.

× × ×

Just take another look at that magnificent series of lectures, elsewhere listed, to be given every
LOOK afternoon throughout the
AGAIN. Agricultural Winter Course.

Where, permit us to ask, could you go to hear a more practical, up-to-date, and interesting series of discourses by the country's most prominent agricultural authorities? Can you afford to miss them? Well, we should say not! Can your friends at home afford to miss them? Again, no! Why not send out another bunch of those Winter Course postals right now, at Christmas tide? If by so doing you should influence a friend to come and take the course, you will have done him a truly great service.

× × ×

THE DOVE.

Apart from greed and strife—
The clamorous rush of life—
Thought, like a tranquil dove—
Iris'd in peace and love—
Broods, with half-folded wings,
On God's eternal things.

× × ×

The cover page of this issue is presented through the courtesy of Mr. Wallace E. Dobbs, '12.

Did you attend the last Grange meeting? No? Well, why not? Some no doubt have excellent excuses, but most,, we **THE GRANGE.** imagine, must plead simply a lethargic attitude. Do you realize that you are missing something—something of importance?

The Grange of today, with its nationwide organization, constitutes the mightiest power at the farmer's command, with which to combat the gigantic combinations and involved schemes designed for the exploitation of the agriculturist.

Are you doing your part to strengthen this organization?

TALKING FARMING TO 42,000 PEOPLE.

Fourteen agricultural trains have been run over the railroads of Ohio, so far this year, by the College of Agriculture. This extensive educational campaign consisted of 51 days of instruction in nearly every county of the state. Over 3500 miles were traveled, and more than 42,000 people received instruction in soil fertility, seed corn selection, wheat culture, sugar beet culture, poultry, husbandry, hog raising, and horticulture. The last of the series was a horticultural train run over the Ohio River and Western Railroad in eastern Ohio, Dec. 13, 14 and 15.

THE FIRST UNIT.

Through the efforts of Prof. Vivian, the Horticultural Department has been allowed \$1,000.00 from the Emergency Board for the construction of a green house. This is the first of a series which have been planned that will cover 20,000 square feet. The old houses will be used for vegetable work largely.

be removed. The new one will be 21 feet by 100 feet, to be of semi-iron construction, with concrete walls. There will be solid beds in the center and raised concrete beds along the walls. It

IN SEARCH OF HIS HOME.

A peaceable resident of West Sixty-fifth street was rudely awakened from sleep last week, at about two-thirty a. m., by a loud ring at his doorbell.

Throwing open the window, he stuck his head out and in no very pleasant manner demanded to know what was wanted.

"Scuse me, sir," answered a muddled voice. "Does Jones — hic — hic—live here?"

"Jones?" said the party addressed angrily. "Of course, not. What the devil do you mean by ringing people's bells at this time of morning? Who are you, anyway?"

"Who'm I?" asked the disturbed, apparently surprised at not being recognized. "Why, I'm Jones!"—Lippincott's.

Fitting Birds for the Show

(Concluded from page 212)

dropped a small quantity of sweet oil. Then at shipping time rub them well with a cloth dampened with alcohol, which removes stains and brightens the feathers.

After the birds have been thoroughly cleaned, rub the head, comb, wattles,

and legs with a solution of equal parts of alcohol and sweet oil, with a few drops of oil of sassafras added. This will make the head and comb red.

If these directions are followed upon birds in good flesh and health, wearing the best of feathers, the birds will win.

LECTURES EXTRAORDINARY!

The following announcement of speakers, subjects and dates for the Winter Course Lectures should be of intense interest to every student of agriculture:

Jan. 2.—Getting Started. Alfred Vivian, Acting Dean of College of Agriculture.

Jan. 3.—The Farmer's Education. W. O. Thompson, President of Ohio State University.

Jan. 4.—The Farmer and the School. A. B. Graham, Superintendent of Agricultural Extension, O. S. U.

Jan. 5.—Protection From Lightning. J. Warren Smith, Section Director, U. S. Weather Bureau.

Jan. 8.—Farm Management Investigation. L. H. Goddard, Chief, Department of Co-operation, Ohio Agricultural Experiment Station.

Jan. 9.—Agricultural Survey of Ohio. L. H. Goddard.

Jan. 10.—Alfalfa in Ohio. W. M. Cook, Assistant, Department of Co-operation, Ohio Agricultural Experiment Station.

Jan. 11.—Fathers and the Boys. J. F. Cunningham, Editor, Ohio Farmer.

Jan. 12.—Some Farms I Have Visited. J. F. Cunningham.

Jan. 15.—The Farm Press a Public School. C. W. Burkett, Editor, American Agriculturist.

Jan. 16.—Suggestions As To What To Do. C. W. Burkett.

Jan. 18.—Publications of the U. S. Department of Agriculture—How to Get Them and How to Use Them. C. W. Reeder, Assistant Reference Librarian, O. S. U.

Jan. 19.—Publications of the State Experiment Station. C. W. Reeder.

Jan. 22.—Soil Building in the Old World and the New. Joseph E. Wing, Associate Editor, Breeders' Gazette.

Jan. 23.—Sheep Farming in Several Countries. Joseph E. Wing.

Jan. 24.—A Trip Down the Grand Canyon. Julius E. Stone, Trustee, Ohio State University.

Jan. 25.—Confessions of a Farmer. A. P. Sandles, Secretary, Ohio Department of Agriculture.

Jan. 26.—Protecting Orchards from Frosts. J. Warren Smith.

Jan. 29.—The Work of the Dairy and Food Commission. S. E. Strode, State Dairy and Food Commissioner.

Jan. 30.—Rations for Fattening Swine. B. E. Carmichael, Chief of Department of Animal Husbandry, Ohio Agricultural Experiment Station.

Jan. 31.—Rations for Fattening Lambs. B. E. Carmichael.

Feb. 1.—Beautifying the Home Grounds. Alfred Vivian.

Feb. 2.—The County Y. M. C. A. Work. C. C. Hatfield, Secretary, County Y. M. C. A.

Feb. 5.—Farm Forestry. C. H. Goetz, Department of Forestry, O. S. U.

Feb. 6.—Farm Forestry. C. H. Goetz.

Feb. 7.—The Traveling Library. J. H. Newman, State Librarian.

Feb. 8.—Your Own State. E. S. Bayard, Editor, National Stockman and Farmer.

Feb. 9.—Breeding for Usefulness. E. S. Bayard.

Feb. 12.—Experiments With Wheat. C. G. Williams, Chief of Department of Agronomy, Ohio Agricultural Experiment Station.

Feb. 13.—Crop Rotations for Ohio. C. G. Williams.

Feb. 14.—Experiments With Corn. C. G. Williams.

Feb. 15.—Oat and Soybean Experiments. C. G. Williams.

Feb. 16.—Grasses and Clovers. C. G. Williams.

Feb. 19.—The Basis of Soil Fertility. C. E. Thorne, Director, Ohio Agricultural Experiment Station.

Feb. 20.—Feeding the Crop. C. E. Thorne.

Feb. 21.—Liming the Land. C. E. Thorne.

Feb. 22.—Barnyard Manure. C. E. Thorne.

Feb. 23.—Possibilities on the Ohio Farm. C. E. Thorne.

PRIZE LETTERS.

The International Live Stock Exposition of Chicago offered \$25.00 as premiums to Animal Husbandry students writing the best letter home to their parents telling why they should visit the International.

The following men were the lucky winners: O. H. Pollock, \$10.00; A. J. Bishop, \$5.00; V. A. Place, \$3.00; W. W. Brownfield, \$2. The following men received a dollar each: P. M. Logan, G. O. Reed, C. F. Tompkins, D. M. Collette, and C. J. Window.

MISS LEUE GOES TO INDIA.

Miss Elsie Leue, Senior in the College of Agriculture, has been appointed teacher of Agriculture in a college conducted by the Presbyterian mission board at Punjab, India. Miss Leue graduated at the University of Cincinnati, and is the only woman who has ever taken a complete course in Agriculture at the University.

“Battle of the Kernels”

PARTIAL PREMIUM LIST.

GOVERNOR HARMON, GOLD MEDAL.

STOCKMAN-FARMER, \$25.00 SILVER CUP.

INTERNATIONAL HARVESTER CO., IMPLEMENT, VALUE \$25.00.

FIVE SUBSCRIPTIONS TO “OHIO FARMER.”

FOUR SUBSCRIPTIONS TO “FARM AND FIRESIDE.”

SUBSCRIPTION TO “AMERICAN AGRICULTURIST.”

TWENTY-FIVE DOLLARS IN CASH.

THE chance to compete for valuable premiums and honors will be the feature of “The Battle of the Kernels”—the Corn and Grain Show to be held in Townshend Hall, January 11 and 12. In spite of the fact that the premium list is still incomplete as the “Agricultural Student” goes to press, it is already evident that everyone making an entry will have a good opportunity to win something worth while. A number of probable donors of premiums remain to be heard from, and when their replies are in, the list will no doubt be even more attractive than it now is.

The Governor’s Medal will be awarded for the sweepstakes five ear sample of corn. The medal will become the permanent possession of the winner and be engraved with his name on the reverse side. Since this is a sweepstakes trophy, every five ear sample of corn in the show will be in competition for it.

The Silver Loving Cup donated by the “National Stockman and Farmer” is offered for the best single ear of corn of any variety or color. The name of the winner will be engraved on the cup, which will remain at the University.

Each of the other classes of corn, oats, wheat, and barley will have three premiums, two of which will be cash and one a subscription to a farm paper. At least three or four dollars will be offered in each class.

Complete Classification.

CLASS A—Yellow corn, any variety.

CLASS B—White corn, any variety.

CLASS C—Wheat, any variety.

CLASS D—Oats, any variety.

CLASS E—Yellow corn, any variety.

CLASS F—White corn, any variety.

CLASS G—Wheat, any variety.

CLASS H—Oats, any variety.

CLASS I—Corn, single ear, any variety or color (not in 5-ear sample.) (Stockman-Farmer Cup.)

CLASS J—Sweepstakes, four classes—A, B, E and F. (Governor Harmon Medal.)

CLASS K—Barley, open to all students of the Agricultural College.

Rules.

Classes A, B, C and D open to students taking, or that have credit for Agronomy No. 109.

Classes E, F, G and H open to any student in the Agricultural College not taking, or having credit for Agronomy No. 109.

Classes I, J and K are open to all students of the Agricultural College.

Entrance Fee.—Each exhibitor will be charged an entrance fee of 25 cents, with privilege of entering one sample in each class in which the exhibitor is qualified to enter.

Corn and grain to be the property of the Department of Agronomy after the show.

Samples of corn must contain five

ears. Samples of small grains must contain $1\frac{1}{2}$ quarts.

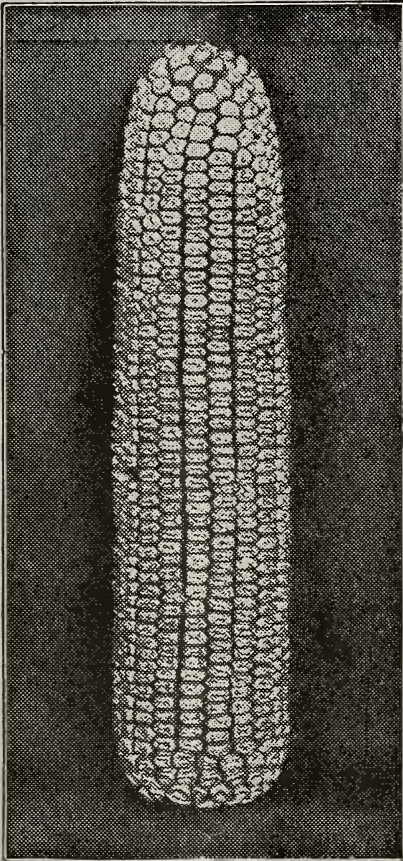
Judges will be persons outside of the University, competent to make the awards.

Samples of corn and grain exhibited must be selected by the exhibitor.

All entries close Monday, January 8, 1912.

Requests for information and entries should be addressed to C. S. Wheeler, Secretary-Treasurer.

Select your sample during the holidays.



Form 3

**World's Best Ear of Corn
for 1910**

CAN WE BEAT IT?

"BLOWING UP THE FARM."

A demonstration in the use of dynamite in agriculture was conducted recently on the University Farm by the Du Pont de Nemours Powder Company. Subsoiling and removing stumps were exemplified. Nearly an acre was subsoiled. Deep holes were bored at regular intervals and tamped tightly after a half stick of dynamite was inserted. Thus the force of the explosion was directed downward, resulting in a thorough shattering of the subsoil for a radius of about eight feet. In very heavy subsoils, the area affected would be much smaller, and the holes would necessarily be closer together. On the type of soil where the demonstration was conducted the cost was \$18 per acre.

For removing stumps and boulders, dynamite is very effective.

Holes for planting trees and subsoiling are accomplished simultaneously by boring shallow holes where the tree is to be placed and tamping them lightly.

In general, dynamite accomplishes the immediate results claimed for it, but whether its use for subsoiling our common Ohio soils would be recompensed ultimately, is yet to be demonstrated.

LOCAL NEWS



THE POULTRY PLANT.

Those in charge of the plans for the new poultry plant are endeavoring to make the \$7,500 appropriation go as far as possible toward completing and equipping as thorough and up-to-date an establishment as possible. It is planned to build a long laying house to accommodate several hundred fowls of different breeds. Adjoining will be the feed house with machinery for the preparation of feeds. There will be several types of colony houses and a large pipe system brooder house. The poultry instruction building, which will be located on the campus, will contain an incubator cellar and a market poultry room. June, 1912, is the date set for having the buildings ready for occupancy. The work will include the study and raising of water fowl and the raising of capons. Professor F. S. Jacoby is in charge.

Prof. A. B. Graham is a charter member and a leader in the latest addition to the list of national societies for the promotion of agriculture. The new society is called "The American Association for the Advancement of Agricultural Teaching."

Through the German embassy at Washington the Animal Husbandry Department has secured a considerable number of herd and stud registry books representing the German breeds of live stock.

COLLEGE HAS GRAIN COLLECTION

The Agronomy Department has an excellent collection of corn, wheat, oats, and grasses, which they use in class work. These are all classified, labeled and displayed in proper form. Ten ear samples of corn, sheaves and jars of wheat and oats occupy important places in the collection and add much to the attractiveness of the display. Any one having peculiar or superior specimens of grain will receive due credit if they will send sample to the Agronomy Department, Townshend Hall, Ohio State University, Columbus, Ohio.

Prof. A. G. McCall was elected Treasurer of the American Society of Agronomy, which met on our campus, Nov. 13-14.

Planting of the grounds about Physics Hall, Chemistry Hall, the Horse and Cattle barns and the Judging Pavilion is being completed as we go to press. The completed plans, as drawn up by landscape architects, include trees along the driveways, shrubbery, and climbing vines for the buildings.

A PRACTICAL MILK CONDENSORY.

The only educational institution that teaches practical condensing of milk is the College of Agriculture of the Ohio State University. The condensing apparatus was installed in the spring of 1909 and the instruction is given by Professor Erf of the Dairy Department.

Prof. A. G. McCall and A. B. Graham have designed and had patented a new water table and drainage apparatus to show the behavior of capillarity and free water in the soil, and that underground drains should be placed as far below the surface of the soil as its characteristics will permit. This apparatus also illustrates the principles involved in the proper construction of a barnyard to prevent loss of plant food. The apparatus is of copper, 3x6x12 inches high, with a solid bottom to represent a layer of hard clay or store. Two brass tubes, sawed transversely, pass within, communicating with the outside, representing tile drains at different depths. A standpipe is attached at a screened opening to show height of free water inside the vessel.

Oakland Stock Farm held its annual autumn Duroc sale on Nov. 21st. Forty-five animals were sold. Females were in greatest demand, selling at an average of \$75 per head, while the males averaged \$45 each. Sears & Nichols, of Chillicothe, were noted among the prominent buyers.

Mr. C. R. Titlow, of the Extension Department, has accepted the position of Director of the Extension Department, West Virginia University. He will take up his new duties about January 1. Professor Titlow has been in the extension work here since 1908, and West Virginia is to be congratulated on securing such an able man.

The extension work in West Virginia is practically undeveloped and Professor Titlow will have a large as well as a fertile field in which to work.

Mr. Goetz will go to Washington the latter part of December to attend a conference of some of the leading foresters of the United States.

Bids for building the new implement barn exceeded the appropriation. The plans will be revised and the work re-advertised.

Hitherto, the use of commercial fertilizers upon the University Farm has been slight. The recent purchase of a carload of phosphate for use in the spring is rather a new departure.



YULETIDE AT "STATE."

Perry Van Ewing, B. S., '11, has accepted a lucrative position at the Kansas Agricultural College, Manhattan, Kans., where he will assist Pres. H. J. Waters of that institution.

The old farm house has assumed a very modern air. Up-to-date appliances, including steam heat, hot and cold water, gas and electricity, have been installed.

The Forestry Department is extending its nursery to the waste areas along the Olentangy. Seeds collected by Forestry students will be planted for comparative study of various forest trees. The planting in the University woodlot is being extended.

Phillip Luginbill, '10, who is with the U. S. Bureau of Entomology, has recently been promoted. He is located at Lafayette, Ind., where he is conducting investigations with forage crops.

"IN TOTO."

A man once inquired of her husband: "Do you give your wife an allowance or does she ask for money when she wants it?"

"Both," was the simple answer.

R. E. Niswonger, '10, is employed by the Kentucky Experiment Station in the Department of Entomology and Botany.

Wm. Bruce, '11, is professor in a Minnesota Agricultural High School.

The following is clipped for the benefit of those who doubt the power of the press:

"Owing to the overcrowded condition of our columns, a number of births and deaths are unavoidably postponed this week."

IRISH AND LAW.

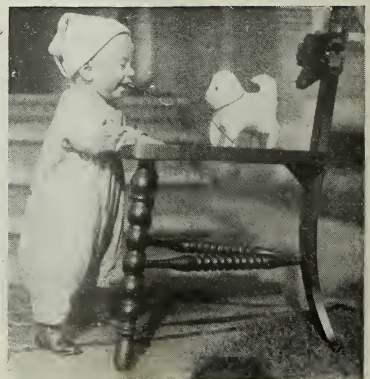
An Irishman who was passing through a cemetery and paused long to study an epitaph which asserted "Here lies Addison B. Witherspoon, a good lawyer, and an honest man."

"What are you looking at that Witherspoon monument so long for, Pat?" inquired his wife.

"I was wondering," said Pat, "what that honest man done that they chucked him in the same grave wid ould Witherspoon!"

Offily—I'm very fond of pigs' feet.

Jubb—There's egotism for you.—Pathfinder.



"WHO'S WHO?"

It is the purpose of the Ohio State University Association to publish at once a little volume containing the names of the members of the Association, with a short biographical account of each member. Where he was born, when he graduated, his degree or degrees, and what he has done since he left college. What books or articles he has written, positions he has held, his present position, honors that have come to him and any other information of interest.

There will also be a classified directory for easy reference. Each name will appear under one classification without charge. For a fee of twenty-five cents for each additional classification the name will be inserted under as many classifications as the applicant is entitled to.

This book is intended to be a help to Ohio State men in a business way. The classified Mercantile and Professional Directory will be a ready reference catalogue of the best men and women that the University has produced. Only members of the Ohio State University Association who are in good standing, will be included in this "Who's Who" volume.

You cannot afford to be left out, especially you alumnal representatives from the largest college on the Ohio State campus!

The Rejuvenation of Orchards—F. H. Ballou. (Ohio Station Bul. 224.)

This gives the results of spraying experiments in southeastern Ohio which were conducted with different spraying materials on different varieties, under many conditions of soil and elevation. The results warrant the substitution of lime-sulphur for Bordeaux mixture. The Bordeaux mixture and the cold spring combined injured the trees, especially on thin, poor soil.

The lime sulphur appeared to stimulate growth as well as to control scab. The spraying results in one county show that 117 orchards which have had an average annual yield of 4,446 bushels produced 63,700 bushels in 1910.

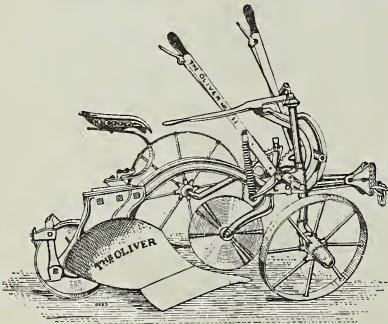
Vocational Agricultural Schools.

The Massachusetts legislature has made it possible for a vocational agricultural school to be established by a town or group of towns formed into a district. Vocational agricultural departments may be established in high schools. The agricultural instructor must devote himself exclusively to the supervision of agricultural projects, to be carried out by the students at their homes, and to giving instruction in the various phases of agricultural science. These schools are to be partially supported by state aid.

"Goddess of the cow's fair eyes."

—Homer.





THE JAMES OLIVER No. 11 SULKY PLOW

By reason of its simple construction, light weight, easy draft, durability, and perfect work is

THE BEST PLOW YOU CAN BUY SOME OF THE REASONS

The only sulky plow made with which you can turn either gee or haw equally well, leaving no hard spots, and avoid the necessity of plowing out corners.

It is the lightest draft riding plow made, due to the entire absence of landside friction and the even distribution of the load. The weight of the plow and driver is CARRIED instead of being DRAGGED along.

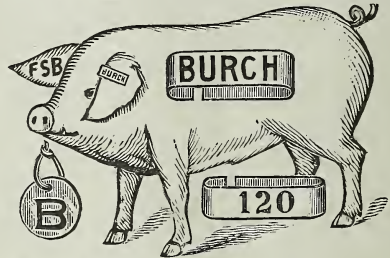
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It is non-poisonous, easily prepared and guaranteed to kill lice, ticks and stomach worms; it cures mange and scab and prevents hog cholera, etc.

Your dealer carries MINOR'S FLUID in stock or can get it from his jobber. If not, write us direct. Get our prices on Dipping Tanks.

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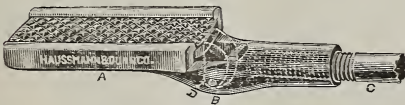
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ALFRED VIVIAN, Acting Dean,
Ohio State University, Columbus, Ohio.

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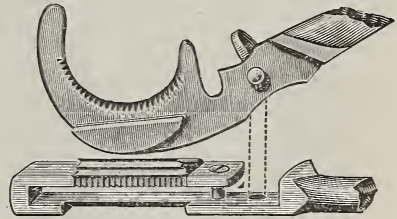
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(Patent Applied For.)

(Figure 1760.)

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His yield per acre compared with our is an object lesson, showing the soundness of his practice.

AVERAGE YIELD PER ACRE

EUROPEAN.

30 bushels.....Wheat
2 tons.....Hay
40 bushels.....Oats
210 bushels.....Potatoes

AMERICAN.

14 bushels.....Wheat
1½ tons.....Hay
32 bushels.....Oats
95 bushels.....Potatoes

When we consider that these yields are obtained on land that has been cropped for hundreds of years, and that the European Farmer has practically doubled his yields per acre in the last 80 to 100 years, European methods of Farming are of vital interest and importance to every Farmer and Student of Agriculture.

The increased yield per acre is explained by the leading European Experiment-Station officials as being due, fully fifty per cent. to the use of Commercial Fertilizer—the other fifty per cent. due to Better Selection of Seed, Better Drainage, Better Tillage and Better Rotation of Crops.

The American Farmer is already occupied with the questions of Drainage, Tillage, Seed Selection and Crop Rotation; also to some extent with the use of Commercial Fertilizers. A broader acquaintance with all these questions, particularly the use of high grade Fertilizers, will enable him to equal, even increase, the yields of his European brother.

Here are a few of the results obtained in actual farming, showing what can be done with Fertilizer in Ohio, along with other efficient farming methods. We can furnish hundreds of others upon application:

| No. of Acres | Crop | Bushels per Acre | Soil. | Location. |
|--------------|-------|------------------|----------------------------|----------------|
| 25 | Oats | 68 | Black Loam | Lindsey, O. |
| 15 | Wheat | 35 | Gravel Clay | Columbus O. |
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| 100 | Wheat | 28 | Clay (farmed 80 yrs.) | Duval, O. |

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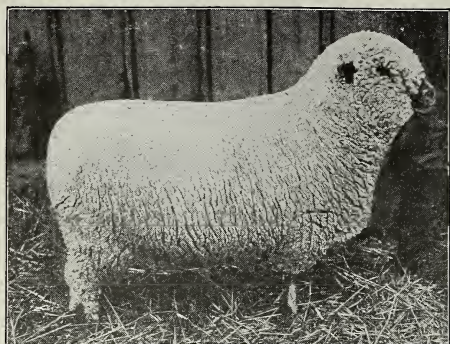
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12,674.00 lbs. milk, 694.64 lbs. fat.

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11,906.81 lbs. milk, 633.51 lbs. fat.

12,158.80 lbs. milk, 619.31 lbs. fat.

Emma McPeake

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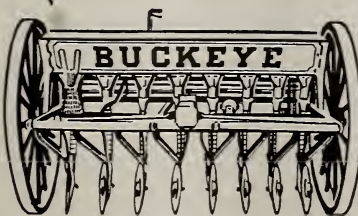
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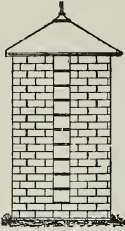


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embodies all that is latest and best in Silo construction. Just concrete and steel combined in approved, scientific manner and form, both in the making of the block and in the erection of the structure.

SIMPLE! STRONG! DURABLE!
COMMERCIALLY PRACTICABLE.

Will not burn, blow, nor rot down. Lowest after-cost of keep-up. Manner of construction and reinforcement fully covered by letters patent. Ask for illustrated and descriptive booklet and testimonials.

The Perfect Silo & Cistern Block Co.
DELAWARE, OHIO.

Dairymen Who Ship Their Cream

to us will tell you that they receive greater benefits and more advantageous arrangements than elsewhere. Why not try us and prove it. A postal brings Booklet. ∴

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BUCKEYE CULTIVATORS

Are made in every style. Recognized everywhere as the "complete, dependable line." No matter what kind of crops you grow or on what kind of land—steep hills, slightly rolling or flat land—there is made a Buckeye Cultivator that will "insure the greatest yield from any field." Send for Buckeye Cultivator Catalogue and go to your local implement dealer and insist on seeing Buckeye Cultivators. "The Buckeye—a wise buy."

THE AMERICAN SEEDING MACHINE CO. INCORPORATED
SPRINGFIELD, OHIO. U.S.A.

THOMAS

DRILLS
HARROWS
HAY MACHINES

THE STANDARD

Ask for Catalog.



The Thomas Mfg. Co.
SPRINGFIELD, OHIO.

\$3,000,000



Will be saved this winter to the users of **INDIANA SILOS**. There is another winter coming. 15,000 silos in use our best salesmen. We are the largest manufacturers of silos in the world. Licensed under Harder patent No. 627732.

INDIANA SILO CO.

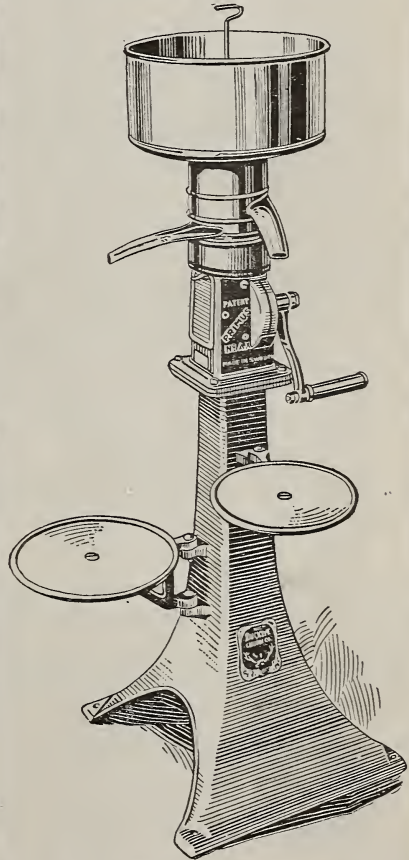
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ANDERSON, IND.

THE PRIMUS CREAM SEPARATOR

stands first because it saves those weary hours of cleaning.

It is the simplest—having fewest parts—is the most easily and quickly cleaned, the lightest running, and the closest skimming separator made. It is low priced and lasts a lifetime.

Get more money out of your cows. Write us for full information and catalog.



THE BUCKEYE CHURN CO.
Dept. A, SIDNEY, OHIO

Our Collegiate Advertisers

Fellow Students, let us show our appreciation not only by giving these firms our trade, but by boosting them to our friends. A thousand students here in school ought to be a class that any firm would be glad to get their goods before. Look over this list of advertisers and do your business with them, at the same time mentioning your connection with "The Student."

Varsity Barber Shop

The Best and Most Convenient Barber Shop for
"Ohio State Students."



The same old stand
refitted and remodeled.

Four Suits Pressed \$1

We remove the spots, put on buttons and sew up rips on all suits pressed.

**SPECIAL ATTENTION TO
LADIES' WORK**

Work called for and delivered.
Phone us.

Ohio Cleaning Co.

1585 N. HIGH ST.

(Varsity Barber Shop.)

North 59.

Citizens 11214.

Citizens Phone 7085

Bell, Main 5966

NEW STORE NEW GOODS
NEW MANAGEMENT

THE COLUMBUS SPORTING GOODS CO.

ATHLETIC AND SPORTSMEN'S
SUPPLIES

16 EAST CHESTNUT STREET.

The McDonald Hardware Co.

1204 NORTH HIGH STREET

We are always pleased to do business
with O. S. U. boys.

TWO PROMINENT INSTITUTIONS of learning: O. S. U. for training and developing the mind; Howald's for training and developing an artistic taste in beautifying the home.

We cordially invite you in and look over our line of Furniture, Rugs and Draperies.

— — —

HOWALD'S

34-36-38 N. High St.

Please mention THE AGRICULTURAL STUDENT when writing advertisers.

MARZETTI Restaurant

1548 N. HIGH ST.

Headquarters for "Ohio State" Boys.

STRICTLY HOME COOKING.
FAMOUS PORK SANDWICH.
POOL.

Things You Ought to Know!

We are located at Cor. Eighth and High, Columbus, Ohio.

Our Telephones: Citiz. 4253; Bell, N. 1223.

Our goods are the best and always fresh.

Our prices? You can't beat them, quality considered.

We are never in dispute with customer about their accounts.

"Honesty brings Confidence."

"Confidence brings Business."

"Business brings Appreciation."

Thank you,

AARON HIGGINS.

Groff's Pharmacy

DRUGS,
CHEMICALS, STATIONERY
... and ...
TOILET ARTICLES.

2091 North High Strete.

FRATERNITIES AND BOARDING CLUBS

Always Find Our

Meats and Groceries

STRICTLY FIRST CLASS

ABERNATHY BROS.

1609 HIGHLAND STREET

Citz. Phone 16504

Bell, North 857

New Era Restaurant

Just What You Are Looking For:
A place for Students to get good board
at low prices.

A \$3.00 Commutation Book for \$2.75

Give Us a Trial—Sure to Please.

1591-93 NORTH HIGH STREET

(Formerly Turner's Restaurant.)

C. L. VOLK'S

is the place to buy

Groceries, Meats and Fruits

Citz. Phone 6623; Bell Phone N. 608

1553 NORTH HIGH ST.

Clark's Bakery

FINE LINE
BREAD
CAKES
& PIES

Special Attention given
to Clubs and Fraternities

—GO TO—

MILLER'S

—FOR—

Kodaks, Drugs, College
Supplies, etc.

COR. HIGH and TENTH AVE.

GET THE BEST

Special to all Students at Ohio State: The New Student Folder only \$3.50 per dozen. A photo of the best style and strictly up to date.

Baker Art Gallery
COLUMBUS, O.

THE OLD RELIABLE, STATE & HIGH STS.

We Can Fit You No Matter How You're Built

WE are specialists in fitting the hard to fit. We handle each customer in a different way and cater to his individual measure. Likewise, we suit his individual taste. If you have had trouble in getting fitted probably, you're the man we're looking for. As for the style and price—well, these will be as pleasing to you as the fit.

The "So-Different" Tailor

WE DO PRESSING.

High St. at Tenth Ave.

Citizens Phone 5396

COLLEGE INN

COR. TENTH AVE. and HIGH ST.

Six Bowling Alleys, Eight Pool Tables, Fine Line of Cigars, Tobacco, Cigarettes, Candies, Soft Drinks, Hot Lunch, Barber Shop.

National Indoor Games

"For the Student."

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SEASON 1911-1912.

To Those Who Neglected to Learn to Dance

Prof. W. J. Rader's Academies of Dancing

*will organize beginners' classes as follows:***HIGH ST. ACADEMY,**

199½ S. High St. Phones: Auto 3456; Bell 5877.

Will organize a beginners' class Wednesday evening, January 3rd, 7:30 o'clock.

NEIL AVE. ACADEMY,

647 Neil Ave. Phones: Auto 4431; Bell 6189.

Will organize a beginners' class Friday evening, January 5th, 7:30 o'clock.

OAK ST. ACADEMY,

827 Oak St. Phones: Auto 4431; Bell 6189.

The Academy has been rearranged for functions of all sizes and is complete in every respect.

TUITION

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|---|--------|
| Gentlemen, per term of 10 lessons..... | \$4 00 |
| Ladies, per term of 10 lessons..... | 3 00 |
| Private lessons, \$1.00 per lesson; six lessons..... | 5 00 |
| Private lessons can be had afternoons or evenings | |
| Tuition can be paid \$1.00 per week until paid. The Waltz, Two-Step, Three-Step, Colum- | |
| bus Minuet and Rye Waltz taught in one term. | |

WINTER PAVILION—Located on Neil Ave., between Goodale St. and Poplar Ave. Open Tuesday, Friday and Saturday evenings. Operated on Summer plan.**ACADEMIES AND PAVILION CAN BE SECURED FOR PRIVATE PARTIES,
CLUB DANCES, FRATERNITY HOPS, ETC.**

The Randall Orchestra

"Ball-Room Experts"

35 CHITTENDEN AVE.

Director, H. Kurtz Randall.

Bell Phone, North 1487

L. B. Carruthers, Mgr.

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THE ELMONT

GROVEPORT, O.

SPECIAL ATTENTION TO STUDENT PARTIES

Only 5 minutes' walk from both the Scioto
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NO BETTER CLOTHES THAN MENDEL'S

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We will make you a better fitting, better
wearing and better looking Suit or Overcoat
for \$20.00 than others will at \$25.00. Fit
guaranteed.**MENDEL, THE TAILOR, 545 N. High St.**
Few Doors South of Goodale St.

STUDENTS WILL RECEIVE A CORDIAL WELCOME AT

Kiler's Drug Store

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HEADQUARTERS FOR A. D. S. REMEDIES

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DISTINCTIVE

READY-FOR-WEAR

CLOTHING

FOR MEN &
YOUNG MEN

As specialists we provide the wants of men and young men with greater facility and fidelity than the store of many departments. When you want good, dependable clothing, and when you want to be absolutely sure that the things you buy are the correct things, you can call on our stocks to supply your wants with confidence.

CLOTHING, SHOES, HATS, FURNISHINGS

THE **BRYCEBROS.** co.

Neil House Block, Opp. State House.

PRINTING

FOR FARMERS

We make a specialty of printing pedigrees, sale catalogs, pamphlets. Many farmers hold stock sales, or keep pure bred stock, and

need printed matter

We are located at the corner of Noble and Pearl Sts., rear Southern Theatre. We do lots of Agricultural printing. Write for prices.

THE PFEIFER SHOW PRINT CO.
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SPECIAL To Teachers, Students, Ministers, Etc.
On the Late Model Standard

Pittsburg Visible Typewriter

AN HONEST TYPEWRITER AT AN HONEST PRICE.



All
Attach-
ments

\$65.00

TERMS: \$10.00 down and small payment monthly.

Fully guaranteed.

Two-color ribbon—universal keyboard—back spacer—line lock—ball-bearing carriage.

Mention this magazine, and address

**Pittsburg Visible
Typewriter Co.**

330 C. S. & T. Bldg. Columbus, O.

We Clothe the Extreme

HATS, . . . \$2.00

SHOES, . . . \$3.00

GLOVES, \$1.25 to \$2.00

TOP AND BOTTOM SHOPPE

CONNOR & EGAN

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Stoves and House Furnishing Goods
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Agricultural Books, New and Second Hand

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HIGH ST., OPP. ELEVENTH AVE



GROUND PHOSPHATE ROCK



EVERY CAR

HAS SPECIAL CARE,

IS GUARANTEED,

IS ANALYZED.

“PRAIRIE STATE” MEANS QUALITY

Our Standard and Guarantee is positively $12\frac{1}{2}\%$ phosphorus

We will furnish higher grades, if desired.

Fine and uniform grinding make our Phosphate Rock valuable.

PROMPT DELIVERY DIRECT FROM OUR OWN MINES TO YOU.

PRAIRIE STATE PHOSPHATE CO.

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When in need of Surgical or Veterinary Instruments or Hospital Supplies, etc., do not forget we carry a full and complete up-to-date line. Catalogs sent FREE, POSTPAID, UPON REQUEST.

SHARP & SMITH

Manufacturers and Importers of

**High Grade Surgical and Veterinary
Instruments and Hospital Supplies**

103 NORTH WABASH AVE., CHICAGO, ILL.

2 Doors North of Washington St.

Established 1844.

Incorporated 1904.

THE M. HAMM CO.

Manufacturers of

**High-Grade Commercial Fertilizer
Acid Phosphate**

12, 14, 16 and 18 Per Cent.

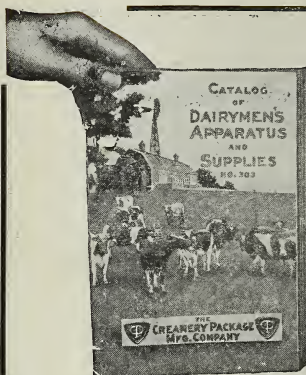
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HOOSIER GRAIN DRILLS

*"The Hoosier is still
the best grain drill."*

Ask the farmer who bought a Hoosier Drill 25 or 30 years ago and who has recently purchased a new Hoosier and he will not hesitate to tell you there is no better grain drill on earth. The Hoosier was up-to-date 50 years ago and it is up-to-date now. Every size. All styles. You can always get what you want in the Hoosier line. Send for the Hoosier Catalogue. Call on your dealer and insist on having a Hoosier Drill.

THE AMERICAN SEEDING MACHINE CO. INCORPORATED
RICHMOND INDIANA, U. S. A.



Everything

FOR YOUR DAIRY

OUR New Catalog of Dairymen's Supplies should be in the hands of every owner of a cow. It is filled from cover to cover—contains 87 pages—with valuable information about modern dairy apparatus and utensils.

WRITE FOR THIS FREE BOOK

It will show you the latest models in butter churns and workers, milk testers and testing supplies, tinware, stable fittings and supplies, engines, boilers, and everything in use on the modern dairy farm at the lowest prices.

Up-to-Date Equipment Adds to Dairy Profits

We can help you in many ways to bigger dairy profits. Our organization covers the entire country and is in close touch with the latest and best methods of dairying everywhere. Write us freely on any subject connected with dairy equipment and methods.

We manufacture equipment for every kind or size of dairy plant and equip more modern plants than all other concerns combined.

The catalog is free to everyone who asks for it. In writing, please state what machines or line of dairying you are most interested in. Address

The Creamery Package Mfg. Company

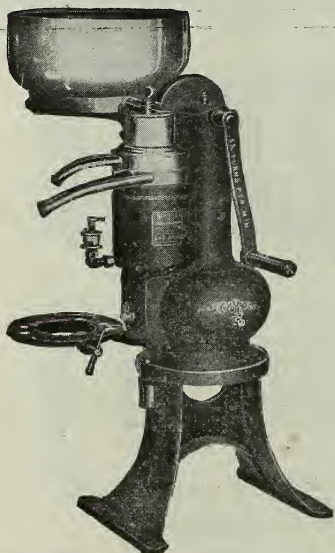
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The "SIMPLEX" Link Blade

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IMPROVED DESIGN



LIGHTEST RUNNING.

LARGEST CAPACITIES.

CLOSEST SKIMMING.

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| 500 lbs.....\$75.00 | 900 lbs.....\$ 90.00 |
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LITTLE FALLS, N. Y.

Manufacturers of Creamery, Cheese Factory
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Also, B-L-K COW MILKING MACHINES.

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